

# [U-Boot] [PATCH 5/5] CVE-2019-13106: ext4: fix out-of-bounds memset

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Mon Jul 8 23:37:07 UTC 2019

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In `ext4fs_read_file` in `ext4fs.c`, a `memset` can overwrite the bounds of the destination memory region. This patch adds a check to disallow this.

Signed-off-by: Paul Emge <[paulemge at forallsecure.com](mailto:paulemge@forallsecure.com)>

```
---
 fs/ext4/ext4fs.c | 7 +++++--
 1 file changed, 5 insertions(+), 2 deletions(-)

diff --git a/fs/ext4/ext4fs.c b/fs/ext4/ext4fs.c
index e2b740cac4..37b31d9f0f 100644
--- a/fs/ext4/ext4fs.c
+++ b/fs/ext4/ext4fs.c
@@ -61,6 +61,7 @@ int ext4fs_read_file(struct ext2fs_node *node, loff_t pos,
     lbaint_t delayed_skipfirst = 0;
     lbaint_t delayed_next = 0;
     char *delayed_buf = NULL;
+    char *start_buf = buf;
     short status;
     struct ext_block_cache cache;

@@ -139,6 +140,7 @@ int ext4fs_read_file(struct ext2fs_node *node, loff_t pos,
     }
     } else {
+        int n;
+        int n_left;
         if (previous_block_number != -1) {
             /* spill */
             status = ext4fs_devread(delayed_start,
@@ -153,8 +155,9 @@ int ext4fs_read_file(struct ext2fs_node *node, loff_t pos,
     }
     /* Zero no more than `len' bytes. */
     n = blocksize - skipfirst;
-    if (n > len)
-        n = len;
+    n_left = len - ( buf - start_buf );
+    if (n > n_left)
+        n = n_left;
     memset(buf, 0, n);
     }
     buf += blocksize - skipfirst;
--
2.20.1
```

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